

ATTACHMENT 1

REPORT REQUIREMENTS

The following requested information is intended to allow DOE to understand the overall character of the proposed site and local environment. Requested data must describe the proposed site setting and the environment that could be affected. Information to support this Detailed Site Report must represent the best and most current information, be readily available in existing literature, and be available, or capable of being made available, for public review. The report must contain a completed Site Selection Reference Data Form for all data used to meet the deliverable requirements and provided with the Detailed Site Report. The Detailed Site Report will be available to the public. Therefore, it shall not contain any proprietary data or other information not subject to public release.

The Detailed Site Report is to include identification of the site and the specific location within that site for one or more of the two GNEP facilities. The report must also include the following documents and descriptions as indicated.

1. Maps

- a. Site location: State, county, latitude and longitude Universal Transverse Mercator (UTM) coordinates, township, range, and sections.
- b. A map of the site showing site boundaries area and linear dimensions; exclusion area; existing site structures and facilities; major land uses (with land use classifications consistent with the U.S. Geological Survey (USGS) categories);
- c. The proposed construction zone for one or more facilities; current zoning classification; sites for any planned buildings and structures (both temporary and permanent); and transportation routes adjacent to the site (including improved roads).
- d. A map of the site vicinity within about a 10-km (6-mi) radius of one or more facilities showing county and local municipality boundaries; place names; residential areas; schools; airports; industrial and commercial facilities; prisons; roads; railroads; major land uses (with land classification consistent with the USGS categories); current zoning classification; utility rights-of-way; rivers; flood plains, other bodies of water; wetlands; trust lands; historic sites; archaeological sites; Native American lands; military reservations; and designated Federal, State, and local parks and natural area. Orient true north at the top of the map.
- e. A map of the region within an 80-km (50-mi) radius of the site showing major civil divisions; highways; transmission corridors that would serve the project; rivers, flood plains, other bodies of water; Native American lands; military

reservations; designated Federal, State, and local parks and natural area; and nonattainment and maintenance areas defined under the Clean Air Act, as amended (Title 42 U.S.C. 7401, et seq.). Orient true north at the top of the map.

To the extent that the information relates to potential environmental consequences of particular GNEP facilities, the information must be developed in sufficient detail to support the analysis. The information identified below must be represented on the maps identified above; separate maps or tables may be used if they better support the analysis.

2. Aquatic and riparian ecological communities.

- a. Describe the fish and shellfish community in the source water body. List species and estimates of the numbers of fish and shellfish that is present in the portion of the water body that could be affected by consumptive water use. The distribution and value of commercial and sport fisheries shall be discussed. The locations of important habitats for fish and shell fish (e.g., spawning areas, nursery grounds, feeding areas, wintering area, and migration routes) within the area that could be affected by consumptive water use shall be fully described.
- b. Describe the riparian ecological community in the source water body. For the portion of the water body that could be affected by consumptive water use, describe the associated riparian ecological community types, including (a) their extent and locations, (b) lists of plants and animal species they contain, and (c) estimates of the abundance of those species.

3. Water resources that may be subject to use conflicts or quality degradation. The following information shall be provided to enable assessment of the magnitude and significance of potential groundwater use conflicts during operation.

- a. Describe all groundwater aquifers potentially impacted by operation of on-site wells, including approximate areal extent, thickness, porosities, and hydraulic conductivities of aquifer strata. The descriptions shall discuss significant uncertainties and inhomogeneities.
- b. Describe existing and known future off-site and on-site wells, including average flowrate, peak flowrate, water use, and completion depth.
- c. Provide maps of steady-state piezometric surfaces estimated with on-site and off-site wells at peak pumpage, average pumpage, and no pumpage. These maps shall indicate the location of all wells and shall annotate each off-site well with the drawdown of the piezometric surface attributable to the on-site wells and with the drawdown of the piezometric surface attributable to the off-site wells. Describe the methods of analysis, including assumptions used.

- d. Describe the existing and known future groundwater rights (including Native American tribal groundwater rights).
 - e. Describe any wetlands in the vicinity that might be impacted by a lowered water table.
 - f. Water Quality: Describe potentially affected waters to which discharges from the proposed facilities could be made and describe their classification.
 - g. Describe any existing environmental contamination with impacts or potential to impact the groundwater quality for the proposed site.
 - h. If surface water is being proposed the applicant must state and provide proof of an unencumbered right to withdraw water.
 - i. Describe any existing environmental contamination with impacts or potential to impact the surface water quality for the proposed site.
 - j. Indicate the volume of surface water and ground water available and provide distance from the water source to the proposed site.
4. Critical and important terrestrial (plant and animal) habitats that may be disturbed by the proposed facilities. Critical habitats are described in 40 CFR 17.95 (fish and wildlife) and 17.96 (plants).
- a. If the GNEP facilities could potentially disturb any plant or wildlife habitat, determine whether any of the plant and animal species is important and describe those plant and animal species or wildlife habitat. Important species are those that either (1) have high public interest or economic value or both or (2) may be critical to the structure and function of the ecosystem or provide a broader ecological perspective of an area. Important habitats are defined as those that support important species.
5. Threatened or endangered and special concern species identified on the site or within 10 km of the site. These species include those:
- a. Listed at 50 CFR 17.11 (fish and wildlife) or 50 CFR 17.12 (plants).
 - b. Listed as a threatened or endangered, or other species of concern by the host State.
 - c. Proposed for listing, or are current candidates for listing in the Federal Register.
 - d. Describe threatened or endangered species, or candidate species, and critical habitat that may be found on the site or in the vicinity of the site. This

information shall support the determination of whether the facility is likely to adversely affect such species or habitat.

6. Regional demography, based on the most current (updated) U.S. Census data: population by city, town, and county for those jurisdictions lying fully or partially within 80 km (50 mi) of the proposed site. Provide by census tract/block the composition of minority persons and households below the poverty line within 80 km (50 mi) of the proposed site. Migrant workers as well as full-time residents shall be included. Provide these data by census tract/block for those geographic areas where the potential has been identified for adverse environmental impacts from the GNEP facilities. The most recent Bureau of the Census demographic information shall be supplemented with demographic information from State and local planning agencies. The following information shall be provided in textual, graphical, and/or on maps as necessary to provide adequate data for adequate environmental and/or safety analysis.
 - a. Information related to the area's economic base, including construction industry and construction labor force, total regional labor force, unemployment levels, and future economic outlook.
 - b. Housing information, including the sales and rental markets in the region, number and types of units, turnover and vacancy rate, and trends in additions.
 - c. Information about the local educational system (regional primary and secondary schools and higher institutions), including present and projected capacity and percentage of utilization.
 - d. Public and private recreational facilities and opportunities, including present and projected capacity and percentage of utilization.
 - e. Regional tax structure and distribution of the present revenues to each jurisdiction and district.
 - f. Local plans concerning land use and zoning that are relevant to population growth, housing, and changes in land use patterns.
 - g. Social services and public facilities present and projected.
 - h. Define the present population density, including weighted transient population, averaged over any radial distance up to 32 km (20 miles) and up to 80 km (50 miles) of the proposed site (cumulative population at a distance divided by the area at that distance).
 - i. Distance from proposed site to nearest population centers: 1) at least 20,000 people; 2) at least 50,000; and 3) at least 100,000.

7. Historical, archaeological, and cultural resources: Identify any onsite or offsite historical, archaeological, and cultural properties that could be affected by the proposed facilities. On a copy of the site map prepared above, identify areas of potential effects if historical, archaeological, or cultural properties were found. All on-site historical, archaeological, and cultural properties and any off-site historic, archaeological, and cultural properties located in or near the facilities shall be identified and described in the text.
8. Future Projects: Describe and identify any known and reasonably foreseeable Federal and non-Federal projects and other actions in the vicinity of the site that may contribute to the cumulative environmental impacts of the proposed GNEP facilities.

Information relating to the site safety considerations of the GNEP facilities shall be developed in sufficient depth in textual, tabular, and graphical form to support a detailed safety analysis. The information identified below shall be represented on the maps identified above; or separate maps or tables may be used if they better support the analysis.

9. Geology/Seismology: Describe proposed site locations, including geologic and seismic characteristics, surface faulting, ground motion (including peak ground acceleration and a chance of exceeding this peak), and foundation conditions. Describe the seismic zone and capable faults, as defined in 10 CFR 100, within 200 miles of proposed site location.
10. Weather/Climatology: Describe the site weather and climatological conditions, including:
 - a. Temperatures: average, monthly and annual, extremes.
 - b. Precipitation: average annual and monthly as well as maximum and minimum recorded annual and monthly.
 - c. Wind speeds: average annual, highest annual.
 - d. Hurricane: annual probability, maximum wind speed, tangential velocity, translational velocity, external pressure drop, and site designation, if any, by the U.S. Land Falling Hurricane Probability Project.
 - e. Tornado: annual probability, maximum wind speed, tangential velocity, translational velocity, external pressure drop, and the number and intensity of tornados classified as F2 or higher that have occurred within 1,000 square miles of the proposed site over the last 5 years.
 - f. Identify positions of air quality nonattainment and maintenance areas for the National Ambient Air Quality Standards (NAAQS) relative to the proposed site and probable areas where workers will reside. Note the likely commuter

routes for the workers. If there are no nonattainment and maintenance areas within 80 km (50 mi) of the proposed site and residential locations of workers, this shall be explained and no further analysis is required.

- (i) Identify the pollutant or pollutants for which the area is in nonattainment or maintenance, as well as the severity of nonattainment.
- (ii) Determine the meteorological conditions typically associated with poor air quality with regional climatology.

11. Hydrology/flooding: Describe the maximum probable flood, the flood source(s), and any current or planned activities that could reasonably be expected to affect the maximum probable flood.
12. Regulatory and Permitting: Identify local, regional, state and national regulatory and environmental permits required for this facility, including legislative or regulatory prohibitions that might prevent siting such a facility.
13. Construction Costs: Relative cost of heavy construction projects in the area, as compared to the RSMeans U.S. 30-city average.
14. Storage Capability: Identify the sites storage capability for the volume of nuclear materials associated with commercial scale operations.
15. Other Facilities. Potential hazardous facilities and activities within 5 miles of a proposed site, and major airports within 10 miles of a proposed site should be identified.
16. In addition to the above, indicate whether or not the proposed site, or any portion thereof, is on the National Priorities List or is included in the Comprehensive Environmental Response, Compensation and Liability Information System (CERCLIS) database. The CERCLIS can be found at http://www.epa.gov/enviro/html/cerclis/cerclis_query.html. The National Priorities List can be found at <http://www.epa.gov/superfund/sites/npl/npl.htm>.